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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,242	01/19/2005	Eleanor Bernice Ridley	HP/15-22715/A/MA 2224/PCT	6482
324	7590	02/01/2010	EXAMINER	
Ciba Corporation Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			ROGERS, JAMES WILLIAM	
			ART UNIT	PAPER NUMBER
			1618	
			NOTIFICATION DATE	DELIVERY MODE
			02/01/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/523,242	<b>Applicant(s)</b> RIDLEY ET AL.	
	<b>Examiner</b> JAMES W. ROGERS	<b>Art Unit</b> 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/18/2010 has been entered.

Applicants amendments to the claims filed 01/18/2010 have been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims when defining groups R<sub>8</sub> and R<sub>9</sub> states they can signify independently from each other hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl or hydrogen or methyl, then at the next line the claim states a proviso that R<sub>8</sub> and R<sub>9</sub> are C<sub>1</sub>-C<sub>4</sub> alkyl or methyl, therefore it would not seem that hydrogen could be selected as a group for R<sub>8</sub> and R<sub>9</sub> yet the option is still recited within the claim. The examiner suggests for clarity and to put the claim in better form to simply state R<sub>8</sub> and R<sub>9</sub> are C<sub>1</sub>-C<sub>4</sub>alkyl or R<sub>8</sub> and R<sub>9</sub> are methyl without the recitation of a proviso. Appropriate correction is required.

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Similarly claims 7 while not rejected would be in better form by deleting the proviso limitation and to simply recite that R8 and R9 are methyl.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

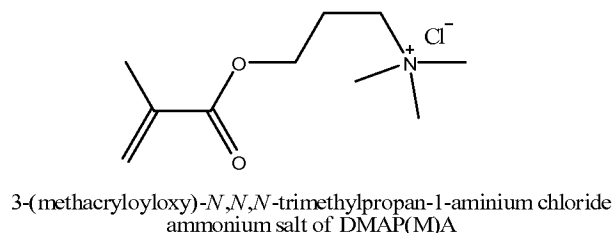
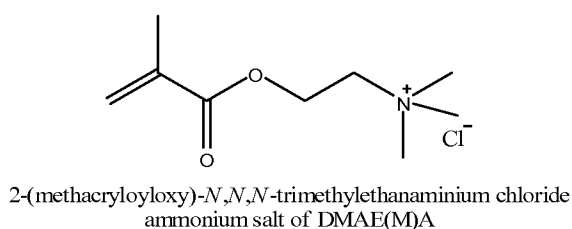
Claims 1,5-7,13-14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Cockcroft et al. (WO 02/40622, cited previously). While this rejection was previously withdrawn by the examiner due to applicant's amendments this rejection is once again relevant to the pending claims.

Cockcroft teaches solutions of cationic copolymers in personal care formulations where the copolymers provide improved rheology, viscosity and maintains or improves substantivity to hair/skin and/or scale lifting and/or improved resistance to combing. See abstract and page 1 last paragraph to page 2 line 2. The cationic polymers include at least one nonionic monomer preferably including acrylamide and its derivatives such as N,N-dimethyl acrylamide (meeting the limitations of the monomer of formula II within claims 1,6,7 and 14). See page 3 line 22-page 4 line 6. The cationic polymer also includes at least one cationic monomer that are preferably chosen from di-C<sub>1-4</sub> alkyl amino alkyl(meth)acrylamides such as dimethyl amino ethyl(meth)acrylate DMAE(M)A and dimethyl amino propyl(meth)acrylate DMAP(M)A, it is preferable that the above methacrylates are quaternary ammonium salts such as ammonium chloride (meeting

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the limitations of the monomer of formula I within claims 1,5,7 and 13). See page 4 line 8- line 22 and claims 1-5. The figure below shows the ammonium chloride salts of DMAE(M)A and DMAP(M)A.

Figure 1



Regarding the limitations on the process of making the cationic polymer in aqueous phase and preparing an oil phase, since the claim is drawn to a method of thickening a water and/or oil based personal care composition by adding the formed copolymer to that composition the method to make the polymers was given no patentable weight since it is essentially a product by process limitation for the copolymer. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Regarding claim 16 Cockcroft teaches several hair-care based cosmetic formulations that incorporate the cationic copolymer. See page 7 lines 19-25.

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Claims 1,5-7,11,13-14 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Galleguillos et al. (US 6,361,768 B1, cited previously). While this rejection was previously withdrawn by the examiner due to applicant's amendments this rejection is once again relevant.

Galleguillos teaches a hydrophilic ampholytic polymer and the method to produce it; the polymer is useful as a thickener or rheology modifier in personal care formulations including hair care products such as shampoos and conditioners. See abstract and col 3 lin 49-col 4 lin 9. The polymer is comprised of 10-45 mole %, preferably 20-35 mole% of at least one cationic monomer (the same monomer as applicants monomer of formula I), 35-95 mole percent of at least one non-ionic hydrophilic monomer (nonionic polymer includes N,N-dimethylacrylamide) and 0.005-1.5 mol percent (50-15,000ppm) of a cross-linking agent (including methylenebisacrylamide), the polymer is modified by HCl, HBr or HI which would meet the limitations that the counter ion of formula I is  $\text{Cl}^-$ ,  $\text{Br}^-$  or  $\text{I}^-$ , since it is inherent that that the inorganic acid will disassociate in aqueous media and the anions will associate with the cationic quaternary amine. See col 4 lin 36-49, col 5 lin 50-col 6 lin 50,col 7 lin 34-47, col 11 lin 31-55 and col 18 lin 13-26. The process to make the copolymer was treated in the same manner as in the Cockcroft rejection above, the method to make the copolymer was given no patentable weight. Regarding the limitations in claim 11 which limits the components of the personal care composition, Galleguillos teaches many additives such as surfactants, the patent teaches that the amount of copolymer used in the personal care composition is between 0.01-20% and

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in the experimental Galleguillos used 8% propylene glycol (meets limitation of an oil-component) in a hair conditioning formulation.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galleguillos et al. (US 6,361,768 B1).

Galleguillos is disclosed above. Galleguillos while describing amounts of cationic and nonionic monomers overlapping applicants claimed ranges for the mole% of those monomers in the copolymer does not disclose amounts within the claimed range of claims 2-3,8,8 and 15. Furthermore Galleguillos while describing an overlapping range for the amount of crosslinking agent does not describe a range within claims 4,8-9 and 15. However the percentage or the ratio of specific ingredients in this composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. It would have been customary for an artisan of ordinary skill to determine the optimal amount of each ingredient needed to achieve the desired results. Thus, absent some demonstration of unexpected results from the claimed parameters, the optimization of ingredient amounts would have been obvious at the time of applicant's invention. It is well-established that merely selecting proportions and ranges is not patentable absent a showing of criticality. *In re Becket*, 33 USPQ 33; *In re Russell*, 169 USPQ 426. It is a prima facie case of

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obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art. E.g., In re Geusler, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (CCPA 1976); In re Malagari, 449 F.2d 1297, 1202, 182 USPQ 549, 553 (CCPA 1974). It is the normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages. See In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980) (“[D]iscovery of an optimum value of the result effective variable in a known process is ordinarily within the skill of the art.” See, e.g., In re Baird, 16 F.3d 380, 29 USPQ2d 1550 (Fed. Cir. 1994); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). *In re Paterson* Appeal No. 02-1189 (Fed. Cir. January 8, 2003).

Claims 1-3,5-7,11-14 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Cockcroft et al. (WO 02/40622).

Cockcroft is disclosed above. Cockcroft is silent of the amounts of monomeric units used in the copolymer and the amounts of oil and copolymer used in the cosmetic compositions. However as recited in the Galleguillos rejection above, the percentage or the ratio of specific ingredients in this composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. It would have been customary for an artisan of ordinary skill to



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determine the optimal amount of each ingredient needed to achieve the desired results. Thus, absent some demonstration of unexpected results from the claimed parameters, the optimization of ingredient amounts would have been obvious at the time of applicant's invention.

Claims 1-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (US 6,365,656) in view of Galleguillos et al. (US 6,361,768 B1) in view of Lentini et al. (US 5,665,368, cited previously).

Green discloses liquid dispersions containing polymers dispersed in a di- or triglyceride oil that are particularly useful in personal care compositions including hair care products. See abstract and col 4 lin 39-53. The polymer may be a cationic copolymer formed from cationic monomers including dialkylaminoalkyl (meth)acrylate quaternary ammonium chlorides such as the ammonium salt of DMAE(M)A, thus meeting the limitations of monomer I. See col 5 lines 26-44. The cationic copolymer could further comprise non-ionic monomers including acrylamide and methacrylamide. See col 5 lines 45-46. The polymers were advantageously crosslinked with diethylenically unsaturated compounds preferably methylene-bis-acrylamide in amounts ranging from 100 to 10,000 ppm, most preferably from 500-900 ppm. See col 5 line 64-col 6 line 11. Thus Green discloses the same crosslinkers such as methylene-bis-acrylamide as applicant's claims and the amounts disclosed overlap applicants claimed range. Green discloses that polymers are sufficiently crosslinked to swell but not dissolve in water and further discloses the optimum amounts of crosslinker can be

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found by routine experimentation. See col 2 lines 64-66 and col 6 lines 10-11. Thus the amount of crosslinker claimed would be obvious to find through routine and ordinary experimentation to optimize the concentration of crosslinker in order to provide the desired solubility to the polymer so that it swells upon exposure to water but does not dissolve. Regarding claims 2,3,8,9 and 15 which limit the % wt of monomer I and II within the copolymer, Green discloses that the cationic monomer (corresponds to monomer 1) is more than 50% of the polymer and most preferably at least 80% by weight, thus the remainder 20% would be comprised of the nonionic monomer, the amounts above are within applicants claimed range.

Green while disclosing nonionic monomers such as acrylamides is silent on the use of acrylamides that meet the proviso within applicant's claim 1 that  $R_8$  and  $R_9$  are  $C_1$ - $C_4$  alkyl for monomer II. Green while disclosing the use of oils in personal care compositions does not disclose the amounts of copolymer or oil component within applicants claimed range within dependent claims 11-12.

Galleguillos is disclosed above and is used primarily for the disclosure within that ionic polymers useful in personal care compositions were already well known to include nonionic monomers such as N,N-dimethyl acrylamide that meets applicant's claimed monomer II within claims 1,6,7,9 and 14. Since dimethylacrylamide is within the genus of acrylamides and is of the same general class it would be obvious to one of ordinary skill in the art that they are all well known art equivalents that are interchangeable with each other. This would be especially obvious since Green and Galleguillos describe their use as non-ionic monomer components in ionic copolymers useful as thickeners

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and rheology agents in cosmetic formulations. Thus the claimed copolymer would have been *prima facie* obvious because the substitution of one known element such as the non-ionic acrylamides disclosed within Green for another known element such as the specific nonionic acrylamides such as N,N-dimethyl acrylamide disclosed within Galleguillos would have yielded predictable results to one of ordinary skill in the art at the time of the invention. The reason to make such a modification is simply to find known options for non-ionic monomers in the art and optimize the copolymer to have the desired properties which are adjusted both by the types and amounts of monomers used. A person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

Lentini is used only for the disclosure within that oils were already well known at the time of the invention to be used in a large variety of concentrations in cosmetics depending upon the application, for instance the cosmetics disclosed within Lentini had an oil content of from about 20-80 percent, overlapping the amounts claimed in claims 11-12. See abstract, col 2 lines 58-61 and claim 1. Lentini discloses that the oil in the personal use compositions can function as emollients that help maintain softness, smoothness and pliability of the skin. Lentini also discloses that the oils can act as occlusive agents that increase the water content of skin and hair by minimizing the evaporative loss of water from skin and hair surfaces. See col 4 lines 40-47. It would therefore be obvious to one of ordinary skill in the art that the personal care compositions disclosed by Green and Galleguillos could be modified to have desirable

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emollient and occlusive properties by varying the amount of oil over a wide range as disclosed by Lentine in order to obtain a cosmetic with the desired properties.

### **Conclusion**

No claims are allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Rogers, Ph.D. whose telephone number is (571) 272-7838. The examiner can normally be reached on 9:30-6:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael G. Hartley/

Supervisory Patent Examiner, Art Unit 1618